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Tax deductible carbon sink forests?

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Executive summary

- A tax deduction is currently available to businesses that plant a forest for the purposes of absorbing carbon dioxide from the atmosphere.
- Parliament has recently expressed concerns about the consequences of this tax deduction including the possible conversion of prime agricultural land to forestry, the impact on water resources, the disturbance of rural communities, the length of time that these forests remain in the ground, the possible large corporate involvement in planting such forests and inappropriately claiming the available tax deduction and the further spread of inappropriately sited monoculture forests.
- The returns from planting a carbon sink forest are likely to be very low, especially in the first years of such a forest's life. Possibly too low to justify the resumption of prime agricultural land from food production. If this is the case it is unlikely that rural communities will face significant disruption.
- Removing a carbon sink forest may result in the denial of the relevant tax deduction.
- Recently announced regulations require the possible diversion of water resources by a carbon sink forest to be taken into account. These regulations depend on the completeness of various water allocation plans. Unfortunately, these plans, across Australia, may not be complete until 2011 at the earliest.
- One reading of the regulations may require that biodiverse forests be planted to obtain the relevant tax deduction. However, this is not a widely held view.
- There are several companies now actively planting forests for environmental purposes, including for the absorption of carbon dioxide, throughout Australia.

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Introduction

Without doubt, the issue of allowing tax deductions for certain expenses incurred in planting a carbon sink forest has become a controversial topic. The purpose of this paper is to provide Parliament with background to the tax deduction for carbon sink forestry, explain why carbon sink forest are important in controlling emissions, outline recent objections to this measure during the Senate debates over the period 24 to 26 June 2008 and provide additional background material on these matters.

The following discussion only concentrates on the tax deduction now available for the planting of carbon sink forests. The carbon sink forest deductions should not be confused with the tax deductions now available for investment of a forestry Managed Investment Scheme (MIS)¹ or for general environmental protection expenditure.²

Carbon sink forests – why are they important?

There are a range of emission control and reduction methods available to policy makers. These methods include the removal of gases from power stations and other emitting facilities' exhausts, the reduction in the use of carbon based fuels and switching to fuels with less carbon content. Another alternative is the reabsorption of the most important greenhouse gas, carbon dioxide (CO₂), by plants, in particular by trees.

An important motive for the use of carbon sink forests is the prospect of avoiding more expensive controls on the emission of carbon dioxide and other greenhouse gases. It has been suggested that growing trees to remove CO₂ from the atmosphere would be cheaper than developing and implementing technologies to decrease the emissions of existing industries, such as switching to alternative fuels for energy production or the use of scrubber-type cleaning technologies. Cleaning technologies in particular may cost as much as 10 times that of other means per unit of carbon stored. Carbon taxes on fuels are likewise feared to be expensive instruments, perhaps costing double what it would take to reduce emissions through the use of carbon sink forests.³

Additional studies support the conclusion that the planting of carbon sink forests is a cost effective way of offsetting CO₂ emissions. A 2004 study of over 900 carbon sink forest projects suggested that it is likely that the use of such means to remove CO₂ from the atmosphere may be a cost effective way for countries to meet any binding emission reduction

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1. Section 394–10 Income Tax Assessment Act 1997.
 2. Sections 40–744 to 40-765 *Income Tax Assessment Act 1997*.
 3. G. Cornelis van Kooten, Alison J. Eagle, James Manley and Tara Smolak, 'How costly are carbon offsets? A meta-analysis of carbon sink forests', *Environmental Science and Policy*, Vol. 7, Issue 4, August 2004 pp. 239–251.

targets.⁴ A number of other studies have confirmed that the use of forestry is a cost effective way of offsetting CO₂ emissions.⁵

One Australian study supports the cost effectiveness of using forestry for the control of emissions. It also notes that the planting of a monoculture forest (all the same species of tree) is the most economic option and that planting a diverse forest for carbon absorption is not cost effective in tropical Australia without government support.⁶

Carbon sequestration through forestry plays a prominent role in the international climate debate. Afforestation and reforestation projects are already eligible under the Clean Development Mechanism (CDM) of the Kyoto Protocol to the United Nations Framework Convention on Climate Change, although few projects have been developed so far. It is likely that the scope will, in due course, be broadened to include emission reductions from avoided deforestation and forest degradation.⁷ The use of carbon sink forests for emissions control may also be an important part of any post Kyoto international climate agreement.⁸ Thus the ability of Australia to offset emissions by using carbon sink forests may be an important part of its ability to successfully participate in any negotiations leading up to such an agreement.

As positive as the above advantages of carbon sink forestry appear to be, planting trees to control emissions is likely to be only one part of the solution to Australia's environmental problems.

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4. Kenneth R. Richards and Carrie Stokes, 'A review of forest carbon sequestration cost studies: A dozen years of research', *Climate Change*, Springer - Netherlands. 63, Numbers 1–2, March 2004, pp. 46–47.
 5. Ruben N. Lubowski, Andrew J. Plantinga, and Robert N. Stavins. 2005, 'Land-Use Change and Carbon Sinks: Econometric Estimation of the Carbon Sequestration Supply Function' *Regulatory Policy Program Working Paper RPP-2005-01*, Cambridge, MA: Centre for Business and Government, John F. Kennedy School of Government, Harvard University; Robert N. Stavins and Kenneth R. Richards, 'The cost of U.S. forest-based carbon sequestration', Research paper prepared for the Pew Centre on Global Climate Change, January 2005; Andrea Povellato Francesco Bosello and Carlo Giupponi, 'Cost-effectiveness of greenhouse gases mitigation measures in the European agro-forestry sector: a literature survey', *Environmental Science & Policy*, Vol. 10, 2007, pp. 474 – 490.
 6. Colin Hunt, 'Economy and ecology of emerging markets and credits for bio-sequestered carbon on private land in tropical Australia', *Ecological Economics*, Vol. 66, 2008, pp. 309–318.
 7. Shardul Agrqawal and Samuel Fankhauser (eds.), *Economic aspects of adaptation to climate change: Costs, benefits and policy instruments*, OECD, Paris, 2008, p. 110.
 8. Following a series of international meetings throughout the balance of 2008 and 2009 the main post Kyoto agreement on climate change will be negotiated between 30 November and 11 December 2009 in Copenhagen Denmark.

The available tax deductions

Under section 40-1010 of the *Income Tax Assessment Act 1997* (ITAA97) in order to claim the deductions in respect of the expenditure incurred in planting a carbon sink forest the taxpayer must:

- carry on a business for taxation purposes
 - this prevents access to this deduction by hobby farmers with no other business income
- plant the trees for the primary purpose of carbon sequestration
 - this does not prevent the taxpayer for having a secondary purpose in planting the trees, such as improving the biodiversity of the property
- not plant the trees in question for the purposes of felling or using the trees for commercial horticulture, and
- not incur the expenditure in respect of the claimed deductions under either a managed investment scheme or a forestry managed investment scheme.

This section also requires the taxpayer to meet certain environmental guidelines when undertaking these plantings, such as:

- the forest occupies a continuous land area in Australia of 0.2 hectares or more
- at the time the trees are established it is more likely than not that the trees will attain a ‘crown cover’ of 20 per cent or more and reach a height of at least 2 meters
- the land on which the trees are planted was, on 1 January 1990, clear of other trees meeting the same specifications of the first two of the above points
 - this requirement makes any carbon sink forest qualifying for this tax deduction a Kyoto Protocol compliant forest, and
- comply with the specific guidelines issued by the Climate Change Minister (see below and Attachments 1 and 2).

During the 2007–2008 to 2011–2012 income years, 100 per cent of the expenditure may be claimed as a tax deduction. For carbon sink forests established in the 2012–2013 and later income years, 7 per cent per year of expenditure is claimable as a tax deduction for a further 14 years and 105 days.⁹

9. Section 40-1005 ITAA97. A figure reducing by 7 per cent of the original sum a year reaches zero after 14 years and 105 days.

What expenditure is and is not allowed as a tax deduction?

Costs that are able to be deducted from taxable income under these provisions include:

- the costs of acquiring the trees or seeds
- the costs of planting the trees or seeds
- the costs of pots and potting mixtures where the potted plants are being nurtured prior to being established in their long term growing medium, in the ground, in a permanent way
- the costs incurred in grafting trees and germinating seedlings
- the costs of allowing seeds to germinate (whether by broadcasting, deliberate regeneration or planting seeds directly)
- any costs incurred in preparing to plant for the purpose of establishing trees for carbon sequestration, and
- the costs of surveying the planted area.¹⁰

Only expenditure on the establishment of a carbon sink forest will be allowed as a tax deduction. The government has indicated that this *precludes* other types of related expenditure be claimed as a deduction, such as:

- fencing
- water facilities for trees in the carbon sink forest
- roads within the forest
- fire breaks¹¹
- land purchased for the purposes of establishing a carbon sink forest (this is also consistent with tax deductions allowed for environmental protection expenditure where the cost of land acquired for these activities, of the cost of capital works undertaken for these activities is also not allowed as a tax deduction¹²), and

10. Explanatory Memorandum, p. 23. Further, Australian Taxation Office (ATO), *Carbon Sink Forests*, ATO Website, 8 July 2008.

11. See The Hon. Wayne Swan MP, Treasurer, *Explanatory Memorandum to the Tax Laws Amendment (2008 Measures No. 1) Bill 2008* (hereafter 'Explanatory Memorandum'), 13 February 2008, p. 23.

12. Australian Taxation Office, *Interpretative Decision ID 204/44*, 16 January 2004.

- any other expenditure on assets separate from the trees established, such as expenses for draining low lying land or clearing land or expenditure in establishing any rights to emissions trading offset credits.¹³

Legislative history

Similar measures to those now legislated were introduced into Parliament in Schedule 1 of the Tax Laws Amendment (2007 Measures No. 6) Bill 2007. This Bill lapsed with the calling of the 2007 election.

These measures were again introduced into Parliament in Tax Laws Amendment (2008 Measures No. 1) Bill 2008 (TLAB1). However, this bill also contained measures to repeal the tax deduction for donations made to political parties. On 19 March 2008 the Senate resolved to refer these latter provisions to the Joint Standing Committee on Electoral Matters for inquiry and report by June 2009.¹⁴ The practical consequence of this reference was that all the measures in TLAB1 can not be passed by Parliament before 2009.

The government's reaction to these developments was to amend Tax Laws Amendment (2008 Measures No. 2) Bill 2008 (TLAB2) so that it contained, amongst other measures, the provisions from TLAB1 relating to tax deductions for the establishment of carbon sink forests.¹⁵ The former bill passed the Senate on 17 June 2008. On 24 June 2008 TLAB2, now known as *Tax Laws Amendment (2008 Measures No. 2) Act 2008*, received Royal Assent. Schedule 8 of the Act amended ITAA97 so that a tax deduction is now available for certain expenses incurred in planting a carbon sink forest.

Proposed TLAB1 amendments

During the Senate debate on 26 June 2008, Senator Milne moved amendments to TLAB1 that, if passed by Parliament, would have invalidate the amendments made to ITAA97 by Schedule 8 of *Tax Laws Amendment (2008 Measures No. 2) Act 2008*.¹⁶ These amendments were not agreed to by the government. Senator Milne has also tabled further amendments requiring that any carbon sink forest qualifying for a tax deduction comprise of a mixture of appropriate tree species, comply with the relevant Australian Standard (ISO14001), be

13. Senator the Hon. Stephen Conroy, Minister for Broadband, Communications and Digital Economy, Tax Laws Amendment (2008 Measures No. 1) Bill 2008: In Committee, Senate, *Debates*, 26 June 2008, p. 64. Also ATO, op. cit.

14. Senator Stephen Parry, Committees – Electoral matters committee reference, Senate, *Debates*, 19 March 2008, p. 1302.

15. The Hon. Chris Bowen, Minister for Competition Policy and Consumer Affairs, and Assistant Treasurer, Tax Laws Amendment (2008 Measures No. 2) Bill 2008, Consideration in Detail, House of Representatives, *Debates*, 14 May 2008, p. 2658.

16. Senator Christian Milne, Tax Laws Amendment (2008 Measures No. 1) Bill 2008: In Committee, Senate, *Debates*, 26 June 2008, p. 68.

subject to an 'ecosystem evaluation' by a qualified expert and be in place for at least 100 years.¹⁷ These particular measures were also not supported by the government or by coalition senators. However, the amendments moved indicate some unease about the provisions of the carbon sink forest tax deduction (see concerns raised below).

The committee inquiry

Senator Ronaldson successfully referred the implementation, operation and administration of the legislation underpinning carbon sink forests, and any related matter, to the Senate Standing Committee for Rural and Regional Affairs and Transport for report by 22 August 2008.¹⁸ Following consideration of submissions, this Committee held a public hearing in Canberra on 24 July 2008 and, as at the date of writing, continues to hold public hearings around Australia.

The regulations

During the Senate debate on TLAB1 on 26 June 2008, certain Senators foreshadowed a disallowance motion in relation to regulations made under subsection 40-1010(3) ITAA97 if certain issues were not dealt with.¹⁹ The text of the regulations and the associated explanatory statement are at Attachments 1 and 2 respectively. One senator stated that such a disallowance motion would be moved.²⁰ Subsection 40-1010(3) requires the Minister for Climate Change (currently Senator Wong) to make guidelines, in the form of a disallowable regulation, about the environmental and natural resources management in relation to the establishment of trees for the purposes of carbon sequestration (that is, planting a carbon sink forest). These regulations were introduced on 2 July 2008 and will most likely be tabled on the re-commencement of Parliament on 26 August 2008.²¹ It has been argued that if these

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17. Senator Christian Milne, Tax Laws Amendment (2008 Measures No. 1) Bill 2008: In Committee, Senate, *Debates*, 24 June 2008, p. 71.
 18. Senator the Hon. Michael Ronaldson, Tax Laws Amendment (2008 Measures No. 1) Bill 2008: Adoption of Report, Senate, *Debates*, 26 June 2008, p. 70.
 19. Senator Christian Milne, Tax Laws Amendment (2008 Measures No. 1) Bill 2008: In Committee, Senate, *Debates*, 26 June 2008, p. 66; Senator Ron Boswell, Tax Laws Amendment (2008 Measures No. 1) Bill 2008: In Committee, Senate, *Debates*, 26 June 2008, p. 69; Senator Stephen Fielding, Tax Laws Amendment (2008 Measures No. 1) Bill 2008: In Committee, Senate, *Debates*, 26 June 2008, p. 70.
 20. Senator Bob Brown, Tax Laws Amendment (2008 Measures No. 1) Bill 2008: In Committee, Senate, *Debates*, 26 June 2008, p. 68.
 21. Environmental and Natural Resource Management Guidelines in relation to the establishment of trees for the purposes of carbon sequestration, Federal Register of Legislative Instruments F2008L02397.

regulations were disallowed then the legislation allowing a tax deduction for certain expenses incurred in planting a carbon sink forest would be inoperable.²²

Concerns raised

A number of issues were raised concerning the provision of tax deductions for carbon sink forests in the Senate debate on this measure from 24 to 26 June 2008. Amongst these issues were:

- that prime agricultural land would be diverted from food production to be used for planting a carbon sink forest
 - this would occur either by the land owner ceasing production and planting a forest or by an investing group buying prime agricultural land and planting a carbon sink forest on that property
 - it may lead to large emitting companies (such as power stations) buying land and planting carbon sink forests
- if enough rural properties in a particular area are diverted to use for a carbon sink forest then the critical mass of an industry will be lost. This will lead to the closure of the remaining farms in that area
 - for example, if enough dairy farms are taken out of production in a particular area it may become uneconomic to maintain milk processing and transport facilities near the remaining farms. Without this kind of infrastructure the remaining farms cannot continue to operate
- the disturbance of established patterns of rural production destroys the social make-up of the area in which it occurs. The provisions allowing a tax deduction for the planting of carbon sink forests has the potential to radically alter the pattern of rural production in a given area leading to its de-population over time
- the tax deduction provides an additional advantage to companies that do not need assistance, such as timber companies (because they can establish such carbon sink forests) or coal miners
- questions were raised about the ability of an individual farmer to access these tax deductions
- as they stand the provisions do not specify that the relevant forest must be maintained for a set length of time

22. Senator Ron Boswell, op. cit.

- it is likely that there would be no net gain in removing CO₂ from the atmosphere if the trees are established, the relevant tax deduction collected, and the trees then ‘harvested’ within a comparatively short period of time
- the planting of carbon sink forests may have adverse effects on water use and flows in their local area
- the species of trees planted may be inappropriate for the area or may not be the most suitable for greatest absorption of CO₂, and
- as noted above the tax deductions only apply to carbon sink forests planted on land that was cleared of native vegetation meeting the above requirements as at 1 January 1990. It does not apply to the expenses of planting a carbon sink forest on land cleared after that date. It has been argued that this requirement artificially restricts the application of this particular tax deduction.

Discussion

The following section provides additional background on the main issues raised in the Senate debate on this measure between 24 and 26 June 2008.

Will prime agricultural land be taken out of production?

Direct financial returns from the planting of a carbon sink forest will be made up of both the allowable tax deduction and any emissions credits arising from the growth of these trees. The question is whether these returns will be sufficient to justify taking prime agricultural land out of food production?

This question will be considered below from the perspective of a taxpayer already owning the land in question as well as from the perspective of a taxpayer considering whether to buy some land for the purposes of establishing a carbon sink forest. The effect of a carbon pricing scheme on this decision will also be considered.

Of course, any planting of trees, for whatever purpose, on food producing agricultural land will prevent that land being used for food production.²³ Further, there are no limits on the land that may be used for the purposes of planting a carbon sink forest in the ITAA97, save that it must have been cleared of a certain type of forest as at 1 July 1990.

Land owner

As noted above, the relevant tax deduction is available to someone operating a business. Thus the tax rate is a nominal 30 per cent of the gross profit. As a tax deduction, the maximum available benefit, in dollar terms, would be 30 per cent of certain expenditures directly related

23. This is apart from specific agroforestry projects.

to the establishment of a qualifying carbon sink forest. One industry practitioner has suggested that this tax deduction will only produce a 15 per cent reduction in the overall costs of establishing a carbon sink and that such a reduction was not considered to be a significant factor in the decision to establish such a forest.²⁴ While the actual costs of establishing such a forest are not to hand, it is unlikely that 30 per cent of such costs would be higher than the current returns available from prime agricultural land, given the high (and likely increasing) prices for most agricultural produce.

If the above argument is true for the 2007–2008 to 2011–2012 income years, when a 100 per cent expenditure deduction is available, how much greater is the impact of the above argument when only 7 per cent per year of the expenditure incurred for eligible carbon sink forests planted in the 2012–2013 and later income years is allowed as a tax deduction each year?

Buying land

The above arguments hold true for those buying land for the establishment of a carbon sink forest. Further, as noted above, the cost of the land and associated costs such as stamp duty are not deductible under these particular provisions.²⁵

In the absence of any other factors, the above position suggests that prime agricultural land would not be taken out of production for the purposes of planting a carbon sink forest and that only marginal, or non-productive, land would be used.

Carbon price

As noted above, the second source of direct income is the eventual payment of emission credits to the investor/landholder arising from the growth of carbon sink forest trees. However, a major uncertainty on the returns from this source is the impact of any Australian emissions trading scheme (Aus ETS). In particular, what the price per tonne of CO₂ will be should owners of a carbon sink forest choose to include them in an Aus ETS.²⁶ If the price of

24. Mr Andrew Grant, Managing Director of CO₂ Group Limited, Evidence before the Senate Standing Committee on Rural and Regional Affairs and Transport (RR&AT Committee), Inquiry into the Implementation, Operation and Administration of the Legislation Underpinning Carbon Sink Forests (hereafter the Inquiry), RR&AT Committee Hansard, 24 June 2008, p. 71.

25. The cost of land is not insubstantial. Based on NSW Department of Lands Country Property Market – Table 13 Wheat Properties the value of land yielding, on average, 2.8 tonnes of wheat per hectare was \$3223 in 2007. The value of land yielding about 1 tonne of wheat per hectare was about \$757 per hectare in 2007. Since 2007 wheat prices have risen further and the value of the land would be correspondingly higher.

26. A tonne of CO₂ appears to be the evolving standard unit for emissions trading schemes around the world. For example one emissions permit traded as part of the European Emissions Trading Scheme represents one tonne of CO₂. The government preferred position is that forestry operators may choose to include their operations in the proposed Aus ETS. See Senator the

one tonne of CO₂ is high enough, and emission credits generated by forestry are of the same value and are included in an Aus ETS, then the potential gains to an emitting firm may be sufficiently large for it to purchase significant areas of agricultural land for the purposes of planting a carbon sink forest.

The recent draft report of the Garnaut Climate Change Review suggested that any Aus ETS may commence operation with the price of relevant permits being limited for a comparatively low amount during the first two years (but not longer than that period).²⁷ Further, the government's preferred position for an Aus ETS is that limits on an emissions permit price apply between 2010–2011 and 2014–15, though at a level that makes it unlikely that such a limit would apply.²⁸ If an Australian scheme commenced operation in 2010, and a 'slow start' approach was adopted where the price of an emissions permit (and by inference an emissions credit) was limited, then this period ends well after the 2012–2013 income year, when the reduced rate of tax deductions beginnings to apply. Thus, the value the emissions credits generated during the initial period (if any, see below) would be corresponding low. Again, this potentially reduces the available returns from planting a carbon sink forest.

Rate of tree growth

The value of any annual emission credit generated by the forest will depend on the rate at which the trees planted for this purpose grow. In their early years, trees do not increase in size at a significant rate. For a typical tree planting, growth tends to be slow in the early years as the trees establish themselves. In many areas carbon absorption rates peak when the trees are about 10 to 20 years old (earlier in faster-growing species), then gradually reduce.²⁹ Thus the value of any emissions credits generated in the early years of a carbon sink forest's life will not be as great as those generated in later years. One industry participant has noted that it could be between 4 to 6 years before any kind of a reasonable income stream from carbon credits commenced to be paid in respect of the growth of the species of tree that his company plants.³⁰ This point further reduces the potential returns from a carbon sink forest.

As noted above, for carbon sink forests planted in this and later years, the available tax deduction is limited to 7 per cent of eligible expenditure an income year for the next 14 years and 105 days. It may be the case that under an Aus ETS, if emission credits from forestry are included in the scheme, the value of such credits may be too low to justify the purchase of high quality agricultural in the first, say, four years of the scheme's operation. Then the

Hon. Penny Wong, Minister for Climate change and Water, *Carbon Pollution Reduction Scheme Green Paper*, 16 July 2008, p. 17.

27. Garnaut Climate Change Review, *Draft Report*, June 2008, p. 390 and following.

28. Senator the Hon. Penny Wong, *ibid*, p. 165.

29. Australian Government, Department of the Environment and Heritage, Australian Greenhouse Office, *Investing in trees as greenhouse sinks*, Canberra, 2006, p. 2.

30. Mr Andrew Grant, *op. cit.*, p. 78.

available tax deduction may be too small after that point to justify the purchase of land, even if the value of the emissions credits generated by these trees rises after that point. With the design of any Aus ETS not finalised, the above argument is only speculative at best.

The probability of the above scenario becoming a reality rests on the likely long term price of an emissions permit and the value of an emissions credit. Recently, the price of a European Union Emissions Trading System (EU ETS) emissions permit was \$A39.08.³¹ During the first EU ETS trading period (2005–2007) when that scheme's permits were at about that price some reductions in emissions took place. When the EU ETS permits price fell to very low level emissions slightly increased.³² It is interesting to note that the emissions credit price in the EU ETS has generally been about 85 per cent of the emissions permit price.³³ In the absence of formally linking the Aus ETS and EU ETS the above price is not a final guide to the likely value of an emissions credit in an Aus ETS. But it does suggest that such values in an Aus ETS need not be very high to achieve a reduction in CO₂ emissions. If this is the case the incentive for the large scale purchase of prime agricultural land is correspondingly low as the government's overall aim is to reduce emissions at the least cost and it would be reluctant to see an emissions permit price higher than was absolutely necessary. The lower the emissions permit price the lower the emissions credit price and the lower the returns from a carbon sink forest.

If the above scenario is realised then it is unlikely that companies having a large amount of emissions will purchase prime agricultural land solely for the purposes of planting a carbon sink forest. On the same basis individual farms in particular regions are unlikely to be completely converted to carbon sink forest use by their owners. Should this be the case it is also unlikely that these provisions, on their own, would necessarily lead to major alteration of current patterns of land use.

Disturbing rural communities

A significant concern is the possibility that the available tax deduction for carbon sink forests may lead to further de-population of rural communities. This would occur if corporate entities bought up small sized farms and planted carbon sink forests on that land.

31. Source: Point Carbon Home Page. Price for December 2008 European Emissions Trading System Permits on an over the counter market (€23.15) converted to \$A on 15 August 2008. One EU Emissions Permit equals one tonne of carbon dioxide.

32. A. Denny Ellerman and Barbara K. Buchner, 'Over-Allocation or Abatement?' – A preliminary analysis of the EU Emissions trading scheme based on the 2006 emission data', MIT Joint Program on Science and Policy of Global Change, Report No. 141, Cambridge MA, December 2006, p. 3 and European Commission, Environment, Climate Change, Community Transaction Log, 2 April 2007 (accessed 12 May 2008) and Mark Kinver, 'EU industry sees emissions rise', BBC News, 2 April 2008 (accessed 12 May 2008).

33. Mr Paul Curnow, *op. cit.*, p. 112.

If the above scenario concerning the likely relative returns from land given over carbon sink forests are realised, this is unlikely to occur. However, what would be the position if the returns from carbon sink forestry were higher than existing uses of such land?

It may be the case that existing land holders would simply switch land use. That is, they may cease producing food from the land and then plant it out as a carbon sink forest. Alternatively, if the returns from carbon sink forestry were high enough, this activity may provide an alternative activity for those in rural communities severely affected by climate change and whose current farming activities were no longer viable. Again, such farmers would be able to stay in their communities rather than leave the land.³⁴ In either case rural communities would not necessarily be disturbed.

Tax considerations and leaving the trees in the ground

Item 1 of the table in subsection 40-1005(5) and subparagraph 40-1010(1)(d) ITAA97 state that in order to be eligible for the above mentioned tax deductions the primary and principal purpose for establishing the trees is 'carbon sequestration by trees'. Obviously, this can not occur if the trees in question are no longer in the ground. If the trees, in respect of which a carbon sink forest tax deduction had been claimed, were later cut down the Commissioner for Taxation may well review the taxpayer's eligibility for that deduction.

The standard period in which the Commissioner for Taxation can amend an assessment for most individuals or very small business taxpayers is two years from the day on which the Commissioner gives notice of the tax assessment. A four-year period of review applies for taxpayers with more complex affairs.³⁵ A longer period still may apply if fraud was involved. It would be likely that a person planting a carbon sink forest and then claiming the relevant tax deduction would have more complex tax affairs. Thus anyone cutting down a carbon sink forest in respect of which they have claimed a deduction may find themselves at risk of having the Commissioner review the claimed deductions (and their other tax affairs) over the succeeding four years. If the Commissioner considered that cutting down such trees constituted fraud, then the period of time over which a person's tax affairs could be reviewed may be far longer.³⁶

34. Ms Kris Anne Newton, Chief Executive Officer, Horticulture Australia Council, Evidence before the RR&AT Committee Inquiry, Committee Hansard, 24 June 2008, pp. 31–32.

35. Section 170 Income Tax Assessment Act 1936.

36. Part IVA of the *Income Tax Assessment Act 1936* contains general anti avoidance provisions that could be invoked. Under these provisions a tax deduction will be denied if the dominate purposes of an activity (in this case planting a carbon sink forest) was simply to obtain a tax benefit. It is a difficult piece of legislation to enforce –but its potential effect is very wide ranging.

As noted above, Senator Milne has sought to amend TLAB1 so that a carbon sink forest must remain in the ground for at least 100 years.³⁷ The government has indicated that such an amendment is unworkable and will not be supported. In making this point the government conceded that it was not possible for it to guarantee that these trees would stay in the ground for that period of time, due to possible changes in ownership of the property.³⁸ The government further argued that such a guarantee would mean that a taxpayer's assessment would not be finalised until well after the four year period mentioned above and add to a business compliance burden if this amendment became law.³⁹

The above points apply mainly to carbon sink forests planted before the 2012–2013 income year. For forests planted in and after that year the relevant tax deductions are available over a 14 years and 105 days period. Thus the implied existence for these forests is at least a 14 year and 105 day period, though this is nowhere stated in either the legislation or its supporting documents.

If such a forest was removed during this period then the tax deductions would cease from that point in time. Further, the removal of such a forest may also direct the Commissioner for Taxation's consideration on whether such a forest was, in fact, established for the purposes of carbon absorption in the first place. The removal of a carbon sink forest may be chancy business from a tax point of view.

Species considerations and leaving the trees in the ground

One of the reasons a carbon sink forest may be later removed is for use as feedstock to a pulp mill or for commercial forestry. Generally the tree species used for commercial purposes, such a blue gums, have a comparatively short life span. The tree species that are currently used for carbon sink forest purposes have a much longer life span and are not suitable for either commercial timber or pulp wood production.⁴⁰

37. This is the minimum period through which trees, in respect of which emission credits under the NSW Greenhouse Gas Emissions Reduction Scheme are claimed, must remain in the ground.

38. The Commonwealth government may not be able to impose conditions on the land use of private property. However, this does not appear to be the case for a private company contracting with a land owner. There are examples of a private company so contracting for trees to remain in place for at least 100 years.

39. Senator the Hon. Stephen Conroy, Minister for Broadband, Communications and Digital Economy, Tax Laws Amendment (2008 Measures No. 1) Bill 2008: In Committee, Senate, *Debates*, 24 June 2008, p. 73.

40. Andrew Grant, op. cit., p. 73. However, mallee gums may be suitable for use as a feedstock for biofuel production see Dr Andrew Warden and Dr Victoria Haritos, Rural Industries Research and Development Corporation, *Future Biofuels for Australia*, June 2008, p. 32.

Impact on water use

Clauses 2 and 3 of the regulations note that:

In cases where establishment of carbon sink forests would represent a significant interception activity in a catchment that has been identified as fully allocated, over-allocated or approaching full allocation, water access entitlements must be obtained.⁴¹

A significant issue in relation to this particular regulation is state of the water allocation plans across Australia. While a few areas have completed their water allocation plans, many have not. These water allocation plans may be completed by no later than 2011.⁴² In the short term it may be the case that these regulations are unable to be applied to carbon sink forests in some areas unless the relevant water allocation plan for that area has been completed.

Given the increasingly scarcity of water, obtaining a water access entitlement, where it is needed, may prove to be an increasingly expensive business. However, where this applies, unless such an entitlement is first obtained the relevant tax deductions will not be allowed.⁴³

The outcome of this situation may be that it would only be economic to plant carbon sink forests in areas that do not interfere with existing patterns of water use and drainage into a catchment. It may be the case that these areas (where planted trees would not affect existing patterns of water use) would be the least productive land.

It is interesting to note that the standard of forest that is required to be planted (i.e. more likely than not reaching a height of 2 meters and attaining a 20 per cent crown cover of the land)⁴⁴ appears to be a forest that is regarded as a sparse cover forest.⁴⁵ If this is the case the

41. Senator the Hon. Penny Wong, Minister for Climate Change and Water, 'Environmental and Natural Resource Management guidelines in relation to the establishment of trees for the purposes of carbon sequestration', Register of Federal Instruments F2008L02397, 2 July 2008.

42. Dr Phillip John Polgase, Research Program Leader, Division of Sustainable Ecosystems, Commonwealth Scientific & Industrial Research Organisation, Evidence before the RR&AT Committee Inquiry, Committee Hansard, 24 June 2008, p. 16 and Mr Kent Martin, Natural Resources Committee, South Australian Farmers Federation, Evidence before the RR&AT Committee Inquiry, Committee Hansard, 24 June 2008, p. 114 and following.

43. Sub-paragraph 40-1010(2)(d) ITAA97 requires the carbon sink forest to meet these guidelines before a carbon sink forest tax deduction is allowed.

44. The term crown cover has been defined as the area covered by the crowns of trees growing closely together, often expressed as a percentage for the combined crown cover of trees in a defined area. New South Wales Department of Primary Industry, Forest Glossary (accessed 14 September 2007)

45. Victorian Department of Sustainability and Environment, Forests, 'What is Crown Cover?', (accessed 14 September 2007)

standard of forest required to be grown for carbon sink purposes may be suitable for the less productive areas of Australia. Such an open crown cover is also good for agroforestry.

Appropriate species

The regulations note that carbon sink forests establishment activities should be guided by regional natural resource management plans and should be based on the best regionally applicable approaches for achieving multiple land and water environmental benefits.⁴⁶ What, if anything, do these guidelines say about the species of trees that are to be planted?

Australia is divided into 56 natural resources management regions. Each of these regions has a natural resource management plan.⁴⁷ There is an overall national plan that has, as one of its objectives:

Reverse the decline in the extent and quality of native vegetation and maintain and restore habitat for flora and fauna.⁴⁸

It could be argued that planting carbon sink forests made up of a single tree species, not native to the area in which the plantings take place, does not meet this objective. Further, if these (and other natural resource management plans objectives) are not met in respect of a particular carbon sink forest then it could also be argued that the forest in question does not meet the requirements of the regulations. In that case a tax deduction would not be allowed. It should be pointed out that this particular interpretation does not appear to be a widely accepted one.

It is interesting to note that the cost of planting a 40 species biodiverse forest is twice as much as the cost of planting a forest of a single species of tree.⁴⁹ If the above interpretation of the relevant regulations is correct this higher cost further decreases the available returns from planting carbon sink forests, as only a biodiverse carbon sink forest would qualify for the available tax deduction.

A weakness in these regulations is that they rely on adequate natural resource management plans being in place for their effectiveness. Unfortunately, the quality and completeness of

46. Senator the Hon. Penny Wong, *op. cit.*

47. Australian Government website, 'Caring for our country' – What is a natural resource management region', (accessed 16 July 2008).

48. Australian Government Website, 'Caring for our country – Natural Resource Management, 'National Objectives' (accessed 16 July 2008).

49. Mr David Williams, Chief Executive Officer, Greening Australia, Evidence before the RR&AT Committee Inquiry, Committee Hansard, 24 June 2008, p. 34 and Mr Kent Martin, Natural Resources Committee, South Australian Farmers Federation, Evidence before the RR&AT Committee Inquiry, Committee Hansard, 24 June 2008, p. 114 and following.

these natural resource management plans appears to be variable across Australia.⁵⁰ That said, there may be requirements to plant a biodiverse forest imposed by the relevant state legislation.

Use of land cleared after 1 January 1990

Under the Kyoto Protocol, parties can count only increases in forest carbon over the commitment period (2008–12) from forests established after 1 January 1990 on previously cleared land ('reforestation', as defined for the first commitment period of the Kyoto protocol).

By ratifying the Kyoto Protocol to the United Nations Framework Convention on Climate Change the Australian government has formally committed itself to a target of 108 per cent of emissions over 1990 levels over the period 2008 to 2012.⁵¹ That year (1990) is also the base year in which the Kyoto Protocol on climate change measured the agreed emissions targets.

In conformity with the Kyoto Protocol, these tax provisions only allow a carbon sink forest tax deduction on land that was clear of trees meeting the required standards as at 1 January 1990. This requirement is aimed at preventing land, already acting as a carbon sink, from being cleared to plant a new carbon sink forest. It also may allow the emissions credits generated from carbon sink forests to be recognised under the current provisions of the Kyoto Protocol.

However, there may be land that was cleared after 1 January 1990 up to the date this legislation was first introduced into the House of Representatives under the current government (13 February 2008), that has fallen into disuse, that would be suitable for planting a carbon sink forest. Such land could not have been said to have been cleared simply for the purposes of planting such forests. Unfortunately, the use of such land for the planting of carbon sink forests would not assist Australia in meeting its Kyoto Protocol targets.

A related problem is the potential eligibility of emissions credits generated by forests planted on such land for trading between various emissions trading schemes. Credits from such forests may not be recognised under the Kyoto protocol and thus would only be able to be traded within in an Australian ETS. Given that international co-operation on emissions trading is the most realistic way of making a significant reduction in global carbon emissions; it may be unwise to allow a tax deduction for carbon sink forests that would not be recognised under the Kyoto Protocols or their successor. However, if the Kyoto requirements

50 . Mr David Williams, *ibid*, p. 38.

51. The Hon. Kevin Rudd MP, Prime Minister, 'Ratifying the Kyoto Protocol', *media release*, Parliament House, Canberra, 3rd December 2007; Senator the Hon. Penny Wong, Minister for Climate Change and Water, 'Its official – Australia is now part of the Kyoto Protocol', *media release*, PW 30/08, Parliament House, Canberra, 11 March 2008.

for recognition of emissions credits generated by forestry change then the case for the allowance of tax deductions for carbon sink forests planted on land cleared after 1 January 1990 would be stronger.

Comment

Many of the above concerns stem from the perceived potential for this tax deduction to generate large scale carbon sink forests. These concerns seem to be based on impacts of large scale forestry and horticulture developments under the MIS arrangements.

There appears to be one crucial difference between a carbon sink forest and a MIS development. If the above arguments are correct, a carbon sink forest will most likely be a low return, long term, activity, while an MIS development has much higher returns, perhaps over a shorter time frame in some instances. This lack of high returns over a comparatively short time frame makes the large scale planting of forests for carbon sink purposes unlikely.

Further, if the planting of carbon sink forests is likely to be a long term, low return, activity – why would you plant one? It is interesting to note that the planting of trees for carbon sink purposes appears to have improved the productivity capacity of marginal land in Western Australia. This occurs because such trees act as a wind break and also lower the water table in low lying areas.⁵² Further, as noted above, the planting and maintenance of carbon sink forests may be the only viable economic activity on marginal or severely degraded land.

What is actually happening out there?

Currently there are three firms, certified under the NSW Greenhouse Gas Reduction Scheme (NGGRS), planting trees to absorb CO₂ from the atmosphere; the two largest ones are CO₂ Group Limited (CO₂)⁵³ and the NSW government owned NSW Forests.⁵⁴

Another listed Australian company, Carbon Conscious Limited, has very recently commenced operations, but is not (as yet) NGGRS accredited. However, it is seeking accreditation under the Australian government's 'Greenhouse Friendly' program.⁵⁵

52. Mr Michael Shields, Non-executive Director, Carbon Conscious Ltd., Evidence before the RR&AT Committee Inquiry, Committee Hansard, 24 June 2008, p. 95.

53. CO₂ Group Limited appears to operate under three company headings – Blue-Leafed Mallee Ltd, Mallee Carbon Ltd and CO₂ Australia Ltd.

54. The third company is Land Care CarbonSMART Pty Ltd, which has generated 70 abatement certificates under the NSW Greenhouse Gas Reduction Scheme. Source: NSW Scheme Registry. By far the largest number of abatement certificates has been created by Forests NSW. This is not surprising as they appear to be the major forest operator in NSW.

55. Carbon Conscious Ltd, 'Greenhouse Friendly accreditation application lodged' *media release*, 3 July 2008.

At a recent Canberra seminar CO2 outlined how it operates:

- the company undertakes contracts with emitters, such as Eraring Power Station Limited or Origin Energy, to generate NGGRS emissions offsets
- CO2 contacts existing land holders to arrange for the planting of trees on their property. CO2 enters into a contract with the landholder for the trees to remain in place for about 100 years from planting
- to date CO2 plants a particular species of tree (mallee eucalypt), that may not be native to the areas in which it is planted, but is hardy, fast growing in low rainfall areas, grows in a very wide range of conditions, generally is not eaten by stock for food and is resistant to insects and disease. CO2 also notes that this particular species does not generally compete with adjacent crops for available soil moisture⁵⁶
- CO2 also undertakes other projects, such as the revegetation of roadsides and construction sites. It also plants these areas with trees to absorb carbon dioxide from the atmosphere
- the company then monitors the growth of these trees and calculates the resulting emission credits, and
- these credits are then sold to the companies clients and the landholder receives an income from the presence of these trees on his property.⁵⁷

The CO2 has also noted that generally looks at using already degraded or economically unviable land on farms for its plantings.⁵⁸ They are not the only company taking this approach.⁵⁹

Conclusions

Planting trees to control CO₂ emissions appears to cost effective compared to the alternatives such as removing this particular gas at source. Further, the deployment of such plantings as an agricultural wind break appears to enhance the productive capacity of certain types of land. Other environmental benefits may flow from planting such forests, such as controlling the water table level and providing habitat for birds and other animals.

56. CO2 Ltd, FAQ, 'Is there competition between crops and trees?', Company website (accessed 17 July 2007).

57. Andrew Grant, Managing Director CO2 Group Limited, Presentation to the Economics Society, Canberra Club, Canberra, 26 June 2008.

58. Andrew Grant, Evidence before the RR&AT Committee Inquiry, Committee Hansard, 24 June 2008, p. 75.

59. Mr Kent Broad, Director – AusCarbon Pty Ltd., Evidence before the RR&AT Committee Inquiry, Committee Hansard, 24 June 2008, p. 84.

In addition, the planting of such forests may place many landholders in a position to participate in the proposed Aus ETS, which is due to commence operation in 2010. This would occur through the generation of emissions credits from carbon sink forests, should the land holder choose to participate in the proposed scheme. Though the value of such credits may not be very great in the early years of a carbon sink forest's life.

The planting of a carbon sink forest does not appear to be a venture that offers high returns over a short period of time. This may be due to the limited nature of the available tax deductions, the possible low initial value of any Aus ETS emissions credits and the lack of such credits in the early years of a carbon sink forest's life. If this is the case it is unlikely that the availability of a tax deduction for a limited range of expenses would be a sufficient incentive to cause the large scale planting of these forests.

The requirement for these forests to meet natural resource guidelines and not interfere with existing patterns of water use without the purchase of additional water entitlements, together with the likely increasing price of water, suggest that the planting of these forests will most likely be limited to less productive or marginal land. The required minimum standard for the forest being planted that qualifies for this tax deduction suggests that these provisions have exactly that possibility in mind.

But some problems remain. Adherence to these natural resource guidelines suggests that forests made up of just one species may not qualify for a carbon sink forest tax deduction. However, this is not a widely held view.

However, if the reduction of emissions through the use of carbon sink forests is to be encouraged consideration may need to be given to allowing a tax deduction in respect of trees planted for carbon sink purposes on land cleared between 1 January 1990 and 13 February 2008. However, this should only be done if the rules for the recognition of emissions credits from forestry under the Kyoto Protocol, or its successor, change.

Attachment 1 – The Regulations



Commonwealth of Australia

Income Tax Assessment Act 1997

I, PENELOPE YING YEN WONG, Minister for Climate Change and Water, pursuant to subsection 40-1010(3) of the *Income Tax Assessment Act 1997*, make the guidelines as set out in the Schedule about environmental and natural resource management in relation to the establishment of trees for the purposes of carbon sequestration.

This instrument commences the day after it was registered on the Federal Register of Legislative Instruments.

Dated this 2nd day of July 2008.

PENELOPE YING YEN WONG

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Minister for Climate Change and Water

Environmental and Natural Resource Management Guidelines
in relation to the establishment of trees for the purposes of carbon sequestration

1. Carbon sink forest establishment should be based on regionally applicable best practice approaches for achieving multiple land and water environmental benefits.

Compliance with this guideline may be achieved by, for example:

- avoiding clearing land of remnant native vegetation as determined by the relevant state or territory legislation; and
- taking into account features of plantation and forestry best practice guides (e.g. state and territory codes of practice) relevant to carbon sink forests; and
- establishing carbon sink forests in ways to avoid any significant negative impacts on water availability; and
- establishing carbon sink forests in ways to enhance potential salinity mitigation benefits and prevent potential increases to in-stream salinity; and
- developing a weed and feral animal management plan and fire management plan as applicable to the state or territory jurisdiction.

2. Carbon sink forest establishment activities should be guided by regional natural resource management plans and water sharing plans, and environmental impacts at a catchment scale should be considered.

Compliance with this guideline may be achieved by ensuring that establishment activities are consistent with regional natural resource management plans, for example by identifying:

- strategies for ensuring that individual carbon sink forest plantings account for natural resource management priorities at a larger regional scale; and
- potential cumulative environmental impacts of carbon sink forest activities at a catchment scale.

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In cases where establishment of carbon sink forests would represent a significant interception activity in a catchment that has been identified as fully allocated, over-allocated or approaching full allocation, water access entitlements must be obtained.

3. Carbon sink forest establishment activities should recognise and adhere to all government regulatory requirements.

Compliance with this guideline may be achieved by meeting any applicable Commonwealth, state and territory legislation, and local and regional regulations, when establishing carbon sink forests.

In cases where establishment of carbon sink forests would represent a significant interception activity in a catchment that has been identified as fully allocated, over-allocated or approaching full allocation, water access entitlements must be obtained.

Attachment 2 – Regulations Explanatory Statement

EXPLANATORY STATEMENT

Issued by the Authority of the Minister for Climate Change and Water

Income Tax Assessment Act 1997

Guidelines about environmental and natural resource management in relation to the establishment of trees for the purposes of carbon sequestration

Subdivision 40-J of the *Income Tax Assessment Act 1997* (the Act) provides a deduction for capital expenditure for the establishment of trees in carbon sink forests.

Subparagraph 40-1010(1)(h)(i) of the Act provides that expenditure on establishing trees in carbon sink forests is covered if a taxpayer gives the Commissioner of Taxation a statement that sets out all information necessary to determine whether all of the conditions in subsection 40-1010(2) of the Act are satisfied. The conditions set out in subsection 40-1010(2) include a condition that the establishment of the trees meets the requirements of the guidelines in subsection 40-1010(3).

Subsection 40-1010(3) of the Act provides that the Climate Change Minister must, by legislative instrument, make guidelines about environmental and natural resource management in relation to the establishment of trees for the purposes of carbon sequestration (the guidelines).

The purpose of this instrument is to make the guidelines for the purposes of subsection 40-1010(3) of the Act.

Relevant businesses and organisations (representing carbon sink forest growers and the taxation and accounting professions) were consulted during the development of this instrument. Consultation on this instrument included an initial briefing session with invited stakeholders and those who indicated an interest. Stakeholders were provided with a copy of the draft guidelines and an opportunity to submit comments on the draft guidelines. Discussions also took place with stakeholders on significant matters raised in their submissions.

This instrument is a legislative instrument for the purposes of the *Legislative Instruments Act 2003*.

This instrument commenced the day after it was registered on the Federal Register of Legislative Instruments.

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